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<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/869,025	PODLASKI-PYZIK ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Elena Tsoy	1762	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to June 22, 2001.
2. ☒ The allowed claim(s) is/are 1,2,4-8,12,13,18 and 20-27.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets" ) must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948 ) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>June 22, 2001</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                                    | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

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***Preliminary Amendment***

1. Claims 10 and 11 have been cancelled. New claims 13-27 have been added. Claims 1-9, 12-27 are pending in the application.

**EXAMINER'S AMENDMENT**

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Michael F. Morgan on March 29, 2004.

Substitute the Abstract with the following:

***Abstract***

A multicoat system comprising

- (I) at least one constituent (IA) comprising mesomorphic polyelectrolyte complexes prepared by reacting, in a liquid phase (IB), at least one polymeric and/or oligomeric, organic, anionic polyelectrolytes (IC) with at least one polymeric and/or oligomeric, organic, cationic polyelectrolytes (ID) and/or at least one cationic surfactant (IE) or at least one polymeric and/or oligomeric, organic, cationic polyelectrolytes (ID) with at least one anionic surfactant (IF) in a stoichiometric or non-stoichiometric ratio, pouring the resulting liquid phase (IG) onto a substrate or into a mold and allowing it to solidify, and heat-treating the resulting solid (IH); and

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(II) at least one coat (IIA), which is three-dimensionally crosslinked, prepared by applying at least one aqueous, thermally curable coating material (IIB) comprising at least one binder (IIC) and at least one crosslinking agent (IID), to the surface of the constituent (IA), and thermally curing the resulting wet film (IIE).

In the specification:

page 5, line 5, change "comrise" to -- comprise --.

Cancel claims 3, 9, 14-17, 19.

Claim 1, line 3, change "1.1.1" to -- I.1.1 --.

Claim 1, line 9, change "[or]" to -- or --.

Claim 1, line 13, change "(1G)" to -- (IG) --.

Claim 1, line 18, change "(1A)" to -- (IA) --.

Claim 1, line 20, change "II.1.1)" to -- II.1.1) --.

Claim 1, line 21, change "II.1.2)" to -- II.1.2) --.

Claim 2, line 5, change "1.1.1" to -- I.1.1 --.

Claim 2, line 11, change "and" to -- or --.

Claim 2, line 15, change "(1G)" to -- (IG) --.

Claim 2, line 22, change "(1A)" to -- (IA) --.

Insert between line 24 and line 25 of claim 2 the following:

"II.1.2) at least one cross-linking agent (IID), "

Claim 4, line 2, change "(B)" to -- (IB) --.

Claim 5, lines 3-4, change "but would instead separate again in the solid phase" to -- and would separate again in the solid phase --.

Claim 7, line 2, change "3000C" to -- 300<sup>0</sup>C --.

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Claim 8, line 2, delete “or the reactive system of claim 3,”.

Claim 8, line 3, add comma after “polymers”.

Claim 8, line 4, delete “crosslinkers,”.

Claim 12, line 2, change “or” to -- and --.

Claim 13, line 2, change “(B)” to -- (IB) --.

Claim 15, line 2, change “polyelectrolyte complex precursors” to -- polyelectrolyte complexes--.

Claim 18, lines 3-4, change “but would instead separate again in the solid phase” to -- and would separate again in the solid phase --.

Claim 21, line 2, change “3000C” to -- 300<sup>0</sup>C --.

Claim 22, lines 1-2, delete “or the reactive system of claim 3,”.

Claim 22, line 3, delete “crosslinkers,”.

Claim 23, lines 1-2, delete “or the reactive system of claim 3,”.

Claim 23, line 4, delete “crosslinkers,”.

Claim 24, line 2, delete “or the reactive system as claimed in claim 3,”.

Claim 24, line 3, change “(IIB)]” to -- (IIB) --.

Claim 26, line 1, change “oem” to -- original equipment manufacturer coatings --.

Claim 27, line 2, change “or” to -- and --.

***Allowable Subject Matter***

3. Claims 1, 2, 4-8, 12, 13, 18, 20-27 are allowed.

The following is an examiner’s statement of reasons for allowance: Claims 1 and 2 are allowed because the prior art of the record does not teach or suggest a multicoat system

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comprising at least one coating layer (IA) of a mesomorphic polyelectrolyte complex, and a three-dimensionally crosslinked coating layer (IIA), the multicoat system prepared by reacting in a liquid phase a polyelectrolyte and surfactant of opposite charges, solidifying the applied coating layer, heat-treating the solidified coating layer of the polyelectrolyte complex, then applying to the surface of the heat-treated complex at least one aqueous, thermally curable coating material comprising at least one binder and at least one crosslinking agent, and thermally curing the resulting wet film to form a three-dimensionally crosslinked coating.

Closest prior art of WO 96/05235 teaches a coating layer of a mesomorphic polyelectrolyte complex (prepared by reacting in a liquid phase a polyelectrolyte and surfactant of opposite charges), which is formed by applying to organic or inorganic substrate materials a solution of the complex or gel phase produced by evaporating an organic solvent (See corresponding US 5,863,956, column 5, lines 9-13). However, WO 96/05235 fails to teach that the mesomorphic polyelectrolyte complex can be used in a multicoat system prepared by heat-treating the applied polyelectrolyte complex, then applying to the surface of the heat-treated polyelectrolyte complex at least one aqueous, thermally curable coating material comprising at least one binder and at least one crosslinking agent, and thermally curing the resulting wet film to form a three-dimensionally crosslinked coating.

Closest prior art of Mezger (US 5,725,941) teaches that a liquid crystalline (mesomorphic) polymer can be used in a color determining layer in a multicoat system (See column 4, lines 36-40), which system is prepared by applying to the surface of the cured liquid crystalline polymer a self-crosslinking coating material comprising a binder and crosslinking agent (See column 5, lines 51-57). However, Mezger fails to teach that the liquid crystalline polymer is a polyelectrolyte complex prepared by reacting in a liquid phase a polyelectrolyte and surfactant of opposite

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charges, and the coating is formed by solidifying the applied complex and heat-treating the solidified complex before applying the self-crosslinking coating material.

Claims are allowed 4-8, 12, 13, 18, 20-27 as further limiting allowed claims 1, 2.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### *Conclusion*

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is (571) 272-1429. The examiner can normally be reached on Mo-Thur. 9:00-7:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Elena Tsoy  
Examiner  
Art Unit 1762  
March 30, 2004

